

IN THE CLAIMS

Please amend Claims 1, 12, and 18 as follows:

Claims 1, 12, and 18 have been amended as follows:

- A1
1. A driver circuit for driving a load with a differential signal, comprising:
a first output drive portion operably coupled to a power supply rail;
a second output drive portion coupled to the first output drive portion, a low voltage differential input signal, and further comprising output terminals coupled to the load, and operably coupled with
a constant current source, wherein the second output drive portion is operable to switch alternate polarity terminals of the load to the current source; and
a common mode compensation circuit coupled to the output terminals of the second output drive portion and the first output drive portion, wherein the common mode compensation circuit is operable to detect a common mode voltage associated with the load and generate a compensation signal in response thereto, wherein the first output drive portion is operable to vary an impedance associated therewith in response to the compensation signal, thereby regulating a common mode voltage associated with the load, whereby the differential signal is transmitted to the load at a high rate of speed with a high compliance of the common mode output even at high current loading conditions, while maintaining a simple pre-drive circuit with a wide common mode range.
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- A2
12. A driver circuit for driving a load with a differential signal, comprising:
a voltage mode output circuit operably coupled to a power supply rail;
a current mode switch circuit coupled to the voltage mode output circuit, a low voltage differential input signal, and further comprising output terminals coupled to the load, and operably coupled with a constant current source, wherein the current mode

switch circuit is operable to switch alternate polarity terminals of the load to the constant current source; and

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end
a common mode compensation circuit coupled to the output terminals of the current mode switch circuit and the voltage mode output circuit, wherein the common mode compensation circuit is operable to detect a common mode voltage associated with the load and generate a compensation signal in response thereto, and wherein the voltage mode output circuit is operable to vary an impedance associated therewith in response to the compensation signal, thereby regulating a common mode voltage associated with the load, whereby the differential signal is transmitted to the load at a high rate of speed with a high compliance of the common mode output even at high current loading conditions, while maintaining a simple pre-drive circuit with a wide common mode range.

18. A method of driving a differential signal for high speed data transmission in transceiver, converter, and repeater devices comprising:

detecting a dc voltage associated with the differential signal across a load with a common mode voltage monitor circuit to provide a common mode voltage associated with a node of a voltage divider coupled across the terminals of the load;

A3
applying the common mode voltage and a reference voltage to a common mode compensation circuit;

generating a compensation signal based on the common mode voltage and the reference voltage;

applying the compensation signal to a voltage mode output circuit;

adjusting the impedance of the voltage mode output circuit in response to the compensation signal, thereby regulating the common mode voltage associated with the load at a level set by the reference voltage;

inputting a low voltage differential input signal from a pre-drive circuit and the voltage regulated output from the voltage mode output circuit, into a second output drive portion;

switching the transistors of the current mode switch circuit in response to the low voltage differential input signal, between low and high conduction levels established by the voltage mode output circuit impedance and a constant current source, thereby conducting a current which flows from the voltage mode output circuit, thru the load, and the current mode switch circuit, and a current which flows thru the voltage mode output circuit and the current mode switch circuit; and

transmitting a differential signal to the load at a high rate of speed, with a high compliance of the common mode output even at high current loading conditions, while maintaining a simple pre-drive circuit design with a wide common mode range.
